# IN THE UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF TEXAS MIDLAND/ODESSA DIVISION

| VINTAIVIOVE, CORE. | VIRTAMO | VE. | CORP. |
|--------------------|---------|-----|-------|
|--------------------|---------|-----|-------|

Plaintiff,

v.

AMAZON.COM, INC.; AMAZON.COM SERVICES LLC; AND AMAZON WEB SERVICES, INC.,

Defendant.

Case No. 7:24-CV-00030-ADA-DTG

# **AMAZON'S REPLY CLAIM CONSTRUCTION BRIEF**

# **TABLE OF CONTENTS**

| Page 1 | No | ) |
|--------|----|---|
|--------|----|---|

| INTR | ODUC   | ΓΙΟΝ    |  | 1  |
|------|--------|---------|--|----|
| ARG  | UMENT  | Γ       |  | 1  |
| I.   | The A  | sserted | Claims of the '814 Patent Are Indefinite           | 1  |
|      | A.     | "dispa  | arate computing environments" (claim 1)            | 1  |
|      |        | 1.      | "Unrelated" Is Undisputedly Subjective             | 2  |
|      |        | 2.      | "Stand-alone" Contradicts Other Claim Limitations  | 2  |
|      | B.     | "cont   | ainer" (claim 1)                                   | 3  |
|      |        | 1.      | The Patent's Lexicography Controls                 | 3  |
|      |        | 2.      | VirtaMove Seeks to Improperly Broaden The Claims   | 4  |
|      |        | 3.      | Claim Differentiation Cannot Overcome Lexicography | 5  |
| II.  | The A  | sserted | Claims of the '058 Patent Are Indefinite           | 6  |
|      | A.     | "critic | cal system elements" (claim 1)                     | 6  |
|      |        | 1.      | "Normally" Lacks Objective Boundaries              | 6  |
|      |        | 2.      | "Critical" Lacks Objective Boundaries              | 7  |
|      | В.     | "func   | tional replicas" (claim 1)                         | 8  |
|      | C.     | "share  | ed library" (claim 1)                              | 9  |
|      | D.     | "form   | ns a part of software applications" (claim 1)      | 10 |
| CON  | CLUSIC | )N      |  | 10 |

# TABLE OF AUTHORITIES

| P(s):   | age(s): |
|---|---------|
| Alarm.com Inc. v. ipDataTel, LLC,<br>No. H-18-2108, 2018 WL 5113054 (S.D. Tex. Oct. 19, 2018)                   | 3       |
| Andersen Corp. v. Fiber Composites, LLC,<br>474 F.3d 1361 (Fed. Cir. 2007)                                      | 10      |
| E-System Design, Inc. v. Mentor Graphics Corp.,<br>No. 4:17-cv-682, 2018 WL 6599130 (E.D. Tex. Dec. 17, 2018)   | 3       |
| ntell. Ventures I LLC v. T-Mobile USA, Inc., 902 F.3d 1372 (Fed. Cir. 2018)                                     | 8       |
| nterval Licensing LLC v. AOL, Inc., 766 F.3d 1364 (Fed. Cir. 2014)  | 7       |
| U.S. Well Servs., Inc. v. Halliburton Co.,<br>No. 6:21-CV-00367-ADA, 2022 WL 819548 (W.D. Tex. Jan. 17, 2022)   | 7       |
| Ultravision Techs., LLC v. Holophane Europe Limited, No. 2:19-cv-291, 2020 WL 6271231 (E.D. Tex. Oct. 26, 2020) | 8       |
| Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc., 200 F.3d 795 (Fed. Cir. 1999)                                     | 4       |
| Vistream Techs., LLC v. PLR Holdings, LLC, No. 6:15-CV-974, 2016 WL 6211550 (E.D. Tex. Sept. 27, 2016)          | 7       |
| <i>Vi-LAN USA, Inc. v. Apple Inc.</i> , 830 F.3d 1374 (Fed. Cir. 2016)  | 6       |

#### INTRODUCTION

The patents' own lexicography defines key claim limitations in subjective terms that fail to shed any light on the scope of the asserted claims. Nothing in the patents or prosecution history provides any objective boundaries that would allow a POSITA to ascertain the scope of the claims with reasonable certainty. Unsurprisingly, VirtaMove's response brief offers no evidence that overcomes the patents' express lexicography or converts the patents' subjective definitions into objective boundaries. Thus, the asserted patent claims are indefinite.

#### **ARGUMENT**

### I. THE ASSERTED CLAIMS OF THE '814 PATENT ARE INDEFINITE.

## A. "disparate computing environments" (claim 1)

| VirtaMove's Proposed Construction            | <b>Amazon's Proposed Construction</b> |
|--|---------------------------------------|
| [Original:] No construction necessary; plain | Indefinite                            |
| and ordinary meaning.                        |                                       |
| [New:] Environments run by standalone or     |                                       |
| unrelated computers.                         |                                       |

VirtaMove's response brief proposes a new construction that VirtaMove failed to timely disclose. (*Compare* Dkt. 77 ("Resp.") at 4 *with* Dkt. 71-3 ("ordinary meaning").) Regardless, this new proposed construction is meritless as it fails to resolve the indefiniteness Amazon identified.

The claims are indefinite because the patent's lexicography makes the scope of "disparate computing environments" uncertain. (Dkt. 71 ("Br.") at 3-5.) The lexicography requires computers in the claimed system to be "unrelated" or "stand-alone," which raises two problems. (*Id.* at

- 3.) First, "unrelated" is subjective and the patent provides no objective boundaries for it. (Id. at
- 4.) Second, the "unrelated" and "stand-alone" requirements both contradict other limitations that require multiple computers to form one interconnected system. (*Id.*)

VirtaMove's proposed construction of "disparate computing environments" differs from

the patent's lexicography in several respects, but nonetheless contains indefinite "standalone" and "unrelated" requirements just like the lexicography. (Resp. at 4.)

## 1. "Unrelated" Is Undisputedly Subjective.

VirtaMove never disputes that "unrelated" lacks objective boundaries. (Resp. at 5.) Instead, VirtaMove argues that the Court should ignore the "unrelated" requirement and focus solely on "stand-alone." (*Id.*) But VirtaMove's own proposed construction *includes* the "unrelated" requirement, undercutting VirtaMove's invitation for the Court to ignore it.

VirtaMove's excuse for ignoring the "unrelated" requirement is that it contradicts other claim limitations. (Resp. at 5.) This excuse might arguably make sense if VirtaMove had omitted "unrelated" from its proposed construction. But VirtaMove did not. (*Id.* at 4.)

Regardless, even if VirtaMove's proposed construction did not include an undisputedly subjective term and retained only the "stand-alone" requirement, the claims would remain indefinite because that requirement contradicts other claim limitations as explained below.

### 2. "Stand-alone" Contradicts Other Claim Limitations.

Amazon's technical expert, Dr. Long, explained that claim 1 (from which other asserted claims depend) recites a "plurality" of servers that form one "system." (Dkt. 71-6 at ¶ 36.) "For multiple servers to form a single 'system,' a [POSITA] would understand that they must somehow be connected (e.g., networked) or otherwise related to each other." (*Id.*) Dr. Long explained that "this requirement contradicts the patentee's definition of 'disparate computing environments,' which requires the computers to be 'stand-alone' or 'unrelated." (*Id.* (emphasis added).)

VirtaMove argues that multiple computers can be interconnected in a single system, and somehow still be "stand-alone." (Resp. at 5-6.) But VirtaMove offers no evidence to support this illogical assertion. (*Id.*) VirtaMove argues that it needs no evidence because Amazon bears the

burden of proof. (*Id.*) But VirtaMove ignores the expert evidence from Dr. Long, which satisfies the burden of proof by showing that the patent contradicts itself. (Dkt. 71-6 at ¶¶ 29-30, 33-39.)

Dr. Long testified that "a plurality of servers that make up a single system are necessarily related and *not stand-alone*," so the claim language contradicts the lexicography and a POSITA would not understand the claims with reasonable certainty. (*Id.* at ¶¶ 36-39 (emphasis added).) This testimony is unrebutted. VirtaMove cites no intrinsic or extrinsic evidence that might resolve the contradiction. (Resp. at 5.) Thus, the claims are indefinite. *See E-System Design, Inc. v. Mentor Graphics Corp.*, No. 4:17-cv-682, 2018 WL 6599130, at \*14 - \*16 (E.D. Tex. Dec. 17, 2018) (relying on "Defendant's unrebutted expert" to find indefiniteness); *Alarm.com Inc. v. ipDataTel, LLC*, No. H-18-2108, 2018 WL 5113054, at \*18 - \*19 (S.D. Tex. Oct. 19, 2018) (crediting Defendant's expert testimony that a POSITA would find the claim "nonsensical").

## B. "container" (claim 1)

### VirtaMove's Proposed Construction

[Original:] No construction necessary; plain and ordinary meaning.

[New:] In the alternative: An aggregate of files required to successfully execute a set of software applications on a computing platform. Each container for use on a server is mutually exclusive of the other containers, such that read/write files within a container cannot be shared with other containers.

# **Amazon's Proposed Construction**

An aggregate of files required to successfully execute a set of software applications on a computing platform is referred to as a container. Each container for use on a server is mutually exclusive of the other containers, such that read/write files within a container cannot be shared with other containers. A container comprises one or more application programs including one or more processes, and associated system files for use in executing the one or more processes; but containers do not comprise a kernel; each container has its own execution file associated therewith for starting one or more applications.

# 1. The Patent's Lexicography Controls.

Amazon's proposed construction is taken from the definition of "container" in the '814 patent. (Br. at 5-6.) Lacking any basis to oppose the definition, VirtaMove attempts to recast it as a mere "explanation." (Resp. at 6.) VirtaMove's word game fails because the specification

clearly says it is giving a "definition." (Dkt. 1-1 at 2:16-42 ("The following definitions are used").)

VirtaMove argues that the definition should be discounted because it merely lists examples of how containers "may" be implemented. (Resp. at 6.) But VirtaMove identifies nothing in the definition to support this argument. The definition plainly recites requirements of containers, not exemplary or optional features. (*E.g.*, Dkt. 1-1 at 2:29-30 ("*Each container* for use on a server *is* mutually exclusive") (emphases added).) Indeed, VirtaMove's own alternative construction includes several parts of this definition and thus concedes that these parts are required. (Resp. at 6.)

VirtaMove argues that Amazon and Google offer two different constructions in their two different cases. (Resp. at 7.) But the constructions that Amazon and Google offer are both taken from the same definition in the patent. (Compare Case No. 7:24-cv-00033-DC-DTG, Dkt. 63 ("Google Brief") at 8-10 with Br. at 5-6.) Amazon's proposed construction simply omits certain portions of the patent's definition that are (1) redundant to express claim language, or (2) not material to any disputed issue here. (Br. at 6.) Courts construe claims "only to the extent necessary to resolve the controversy" in a particular case. Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc., 200 F.3d 795, 803 (Fed. Cir. 1999). Because different cases involve different disputed issues, different defendants may appropriately focus their proposed constructions on different parts of the controlling definition. Regardless, Amazon and Google both explained that they have no objection to the Court adopting the patent's entire definition as its construction. (Br. at 6; Google Br. at 9.)

# 2. VirtaMove Seeks to Improperly Broaden The Claims.

VirtaMove argues that the Court should omit several portions of the patent's definition because those portions are allegedly redundant to other claim limitations. (Resp. at 7-8.) But most of the language VirtaMove challenges is not actually redundant and therefore cannot be omitted.

First, the patent's definition requires that "[e]ach container for use on a server is mutually

exclusive ... such that *read/write files* within a container cannot be shared with other containers." (Dkt. 1-1 at 2:29-32 (emphasis added).) In contrast, the claim recites that "*application software* cannot be shared" between containers. (*Id.* at 17:57-59 (emphasis added).) The definition's "read/write files" are not the same as the claim's "application software." At most, application software is one type of read/write file. But the definition requires mutual exclusivity for read/write files of all types—not just application software. Thus, VirtaMove fails to show redundancy.

Second, the patent's definition specifies that a "container comprises one or more application programs including one or more processes, and associated system files for use in executing the one or more processes[.]" (Dkt. 1-1 at 2:34-37.) VirtaMove argues that this requirement is redundant because of claim language that describes the "application programs"—but never mentions the "processes." (Resp. at 8.) According to VirtaMove, separately requiring the processes would not "add anything meaningful" to the claims. (*Id.*) But VirtaMove offers only bare attorney argument to support this position. Attorney argument cannot overcome the patent's lexicography, which expressly distinguishes between "programs" and their "processes." (Dkt. 1-1 at 2:34-37.)

Third, the patent's definition specifies that "containers do not comprise a kernel." (*Id.* at 2:37.) Amazon agrees that this language is redundant to claim 1. If the Court omits this language, it should still include the rest of the sentence in which the language appears:

"A container comprises one or more application programs including one or more processes, and associated system files for use in executing the one or more processes; but containers do not comprise a kernel; each container has its own execution file associated therewith for starting one or more applications."

(*Id.* at 2:34-39 (strikethrough added to redundant language).)

## 3. Claim Differentiation Cannot Overcome Lexicography.

The patent's definition requires that "each container has its own execution file associated therewith for starting one or more applications." (Dkt. 1-1 at 2:37-39.) VirtaMove argues that the

Court should omit this requirement from the construction because claim 2 expressly recites it. (Resp. at 9.) VirtaMove's argument rests on the doctrine of claim differentiation, which "provides a presumption that differently worded claims cover different claim scope." *Wi-LAN USA, Inc. v. Apple Inc.*, 830 F.3d 1374, 1391 (Fed. Cir. 2016). But claim differentiation "cannot overcome a contrary construction dictated by the written description" of a patent. *Id.* Thus, the '814 patent's express definition of "container" forecloses the broader construction VirtaMove seeks.

#### II. THE ASSERTED CLAIMS OF THE '058 PATENT ARE INDEFINITE.

### A. "critical system elements" (claim 1)

| VirtaMove's Proposed Construction  | Amazon's Proposed Construction |
|--|--------------------------------|
| Any service or part of a service, "normally" supplied by an operating system, that is critical |                                |
| to the operation of a software application.  |                                |

The parties agree that the '058 patent defines "critical system elements" (CSEs) as "[a]ny service or part of a service, 'normally' supplied by an operating system, that is critical to the operation of a software application." (Br. at 7; Resp. at 9-10.) This definition makes the asserted claims indefinite because the words "normally" and "critical" are both subjective. (Br. at 8-9.)

### 1. "Normally" Lacks Objective Boundaries.

VirtaMove argues that elements are "normally" supplied by an operating system if "the structure of the operating system is not modified beyond its default operation." (Resp. at 10.) But this definition of "normally" is nowhere in the intrinsic or extrinsic evidence. It is conjured from attorney argument. (*Id.*) Thus, it cannot rebut the testimony of Dr. Long, who testified that a POSITA would understand the word "normally" to lack objective boundaries. (Dkt. 71-6 at ¶ 42.)

VirtaMove's proposed definition of "normally" refers to the functionality of an individual operating system (OS) before that OS is somehow "modified." (Resp. at 10.) In contrast, Dr. Long applied the understanding of a POSITA, who would interpret "normally" to mean that a

feature was common among operating systems generally. (Dkt. 71-6 at ¶ 42.) Dr. Long's testimony is consistent with the '058 patent. For example, the patent introduces CSEs as elements "traditionally" controlled by an operating system. (Dkt. 1-3 at 1:21-28.) The patent also describes CSEs as being part of a "conventional architecture." (*Id.* at 6:62-64.) Thus, when the patent defines a CSE as something "normally" provided by an operating system, it means something that is traditionally or conventionally found in such systems. But the scope of what is considered traditional or conventional is vague. Thus, the claims lack objective boundaries. (Dkt. 71-6 at ¶ 42.)

Even if VirtaMove's definition of "normally" was a viable alternative to the POSITA's understanding as explained by Dr. Long, that alternative would not avoid indefiniteness. At most, VirtaMove's alternative shows that "the claim language might mean several different things" to a POSITA. *See U.S. Well Servs., Inc. v. Halliburton Co.*, No. 6:21-CV-00367-ADA, 2022 WL 819548, at \*9 (W.D. Tex. Jan. 17, 2022). The existence of multiple potential meanings with no "informed and confident choice" dictated by the record confirms that the claims are indefinite. *Id.* 

## 2. "Critical" Lacks Objective Boundaries.

VirtaMove argues that a POSITA would understand the word "critical" in the definition of CSEs because the patent gives "examples." (Resp. at 11-12.) VirtaMove accuses Amazon of ignoring these examples. (*Id.*) However, Dr. Long addressed the examples and testified that they provide no objective boundaries because "the specification never explains why these examples are 'critical' to any application." (Dkt. 71-6 at ¶¶ 43-44; *see also* Br. at 8 (citing Dr. Long).) Thus, a POSITA "is still left to wonder" what else beyond these limited examples might satisfy the claims. *Cf. Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1374 (Fed. Cir. 2014); *Vstream Techs.*, *LLC v. PLR Holdings, LLC*, No. 6:15-CV-974, 2016 WL 6211550, at \*7-\*8 (E.D. Tex. Sept. 27, 2016), *adopted*, 2016 WL 6159624 (E.D. Tex. Oct. 24, 2016) ("limited examples" insufficient).

VirtaMove, relying on attorney argument, contends that the examples in the specification provide objective boundaries for "critical" because "software designed to rely on these services plainly would not function in its intended manner without them." (Resp. at 12.) But VirtaMove is incorrect for two reasons. First, VirtaMove admits that some of the examples are mere "extensions" or "optimizations" to file or network functionality. (*Id.* at 12.) Extensions and optimizations are, by definition, improvements to something that already worked. Thus, VirtaMove fails to show that an application would not function without these extensions or optimizations. Indeed, VirtaMove's own failed analysis of these examples further proves that "critical" is indefinite.

Second, by defining "critical" based on whether services function as "intended," VirtaMove admits the claim scope is subjective. To determine whether an application functions "in its intended manner," a POSITA would need to know another person's subjective intent. Worse, VirtaMove fails to specify *whose* intent controls. The "intended manner" could refer to the intent of whoever designed the software, whoever implemented it, whoever installed it, or whoever used it. VirtaMove proposes no way to objectively ascertain the intent of any of them. Thus, VirtaMove's proposed definition confirms the claims are indefinite. *See Intell. Ventures I LLC v. T-Mobile USA, Inc.*, 902 F.3d 1372, 1381 (Fed. Cir. 2018) (claim depended on what was "important to a particular user"); *Ultravision Techs., LLC v. Holophane Europe Limited*, No. 2:19-cv-291, 2020 WL 6271231, at \*27 - \*28 (E.D. Tex. Oct. 26, 2020) ("desired" ratio was subjective).

# B. "functional replicas" (claim 1)

| VirtaMove's Proposed Construction             | Amazon's Proposed Construction |
|---|--------------------------------|
| No construction necessary; plain and ordinary | Indefinite                     |
| meaning.                                      |                                |

The patent defines "replica" as a CSE "having *similar attributes to* ... a CSE in the operating system (OS)." (Br. at 10.) The word "similar" lacks objective boundaries. (*Id*.)

VirtaMove argues that the patent's definition of "replica" does not apply because the claims require "functional replicas." (Resp. at 13.) But functional replicas are still replicas, so they still must satisfy the definition. And, as Dr. Long testified, the word "functional' provides no objective boundaries for the similarity that the 'replica' definition requires." (Dkt. 71-6 at ¶ 56.)

Instead of the patent's express definition, VirtaMove relies on a different passage later in the specification. (Resp. at 13.) VirtaMove's cited passage states that "replica" encompasses at least three meanings, including "[1] replicas or [2] substantial functional equivalents or [3] replacements of kernel functions." (Dkt. 1-3 at 8:27-32.) This statement is circular because it specifies that a "replica" may encompass "replicas," among other possible meanings. (*Id.*) As Dr. Long testified, "[n]othing in this statement provides an objective boundary for measuring similarity or otherwise resolves the uncertainty in the definition above." (Dkt. 71-6 at ¶¶ 52-53.)

VirtaMove argues that "functional replicas" are somehow limited to "substantial functional equivalents." (Resp. at 13-14.) But this argument contradicts the intrinsic record. The alleged invention is not limited to "substantial functional equivalents" because the patent lists this category among several other alternatives. (Dkt. 1-3 at 8:27-32 ("any of these meanings").) Further, the prosecution history indicates that the "functional replicas" must include "replacements." (Dkt. 71-6 at ¶¶ 57-58.) Because the patent lists "replacements" as one of the several alternatives to "substantial functional equivalents" (Dkt. 1-3 at 8:27-28), this prosecution history confirms that the claims are not limited to "substantial functional equivalents." Thus, VirtaMove's argument fails.

#### C. "shared library" (claim 1)

| VirtaMove's Proposed Construction   | <b>Amazon's Proposed Construction</b>                                      |
|---|--|
| [Original:] No construction necessary; plain and ordinary meaning. [New:] In the alternative: An application library whose code space is shared among all user mode applications. | An application library code space shared among all user mode applications. |

The Court should construe "shared library" in accordance with the patent's definition. (Br. at 11-12.) VirtaMove originally proposed no construction but now proposes an alternative that purportedly fixes two typographical errors in the patent's definition. (Resp. at 14.) Amazon does not object to this alternative construction.

## D. "forms a part of ... software applications" (claim 1)

| VirtaMove's Proposed Construction             | Amazon's Proposed Construction       |
|---|--------------------------------------|
| No construction necessary; plain and ordinary | resides in the same address space as |
| meaning                                       | application code                     |

During prosecution of the '058 patent, the applicant equated "form[ing] part of the application" with "resid[ing] in the same address space as application code." (Br. at 12.) VirtaMove contends that this prosecution statement was "not definitional" because it did not identify every requirement implied by the claim limitation. (Resp. at 16.) But VirtaMove nonetheless admits that the applicant's statement identified at least one "logical prerequisite" that is required to satisfy the claim limitation. (*Id.*) Because all parties agree that residing in the same address space is required by the claim limitation, the Court should construe the limitation to include this requirement. The prosecution history demands such a construction. *E.g.*, *Andersen Corp. v. Fiber Composites*, *LLC*, 474 F.3d 1361, 1374 (Fed. Cir. 2007).

If VirtaMove believed that the claim limitation imposed additional requirements beyond the one identified during prosecution, VirtaMove could have proposed a construction that recited such requirements. But VirtaMove failed to do so. Thus, VirtaMove has no basis for opposing Amazon's proposed construction.

#### **CONCLUSION**

The Court should hold all asserted patent claims indefinite because the patents' lexicography fails to define the scope of the claims with reasonable certainty.

November 26, 2024

Respectfully submitted,

By: /s/ Jeremy A. Anapol

Joseph R. Re (Pro Hac Vice) Jeremy A. Anapol (Pro Hac Vice) KNOBBE MARTENS OLSON & BEAR LLP 2040 Main Street, 14th Floor Irvine, CA 92614

Telephone: 949-760-0404 Facsimile: 949-760-9502 joe.re@knobbe.com

jeremy.anapol@knobbe.com

Colin B. Heideman (Pro Hac Vice) Christie R.W. Matthaei (Pro Hac Vice) Logan P. Young (Pro Hac Vice) KNOBBE MARTENS OLSON & BEAR LLP 925 4th Ave, Ste 2500 Seattle, WA 98104 Telephone: 206-405-2000 Facsimile: 206-405-2001

colin.heideman@knobbe.com christie.matthaei@knobbe.com logan.young@knobbe.com

Harper Estes Texas Bar No. 00000083 hestes@lcalawfirm.com LYNCH, CHAPPELL & ALSUP A Professional Corporation Suite 700 300 N. Marienfeld, Midland, Texas 79701

Telephone: 432-683-3351 Telecopier: 432-683-2587

Counsel for Defendants Amazon.com, Inc., Amazon.com Services, LLC and Amazon Web Services, Inc.

# **CERTIFICATE OF SERVICE**

I hereby certify that on November 26, 2024, all counsel of record who are deemed to have consented to electronic service were served with a copy of the foregoing via the Court's CM/ECF System.

/s/ Jeremy A. Anapol

Jeremy A. Anapol